

AN ESSAY
ON
OPHTHALMIA :

CONTAINING

A History of that Disease,
As it appeared in the First Battalion of the 89th Regiment,

WITH

SOME OBSERVATIONS

ON ITS

Causes and Symptoms.

ALSO, THE

Medical Treatment, &c.

Which have been crowned with unparalleled Success.

IN A LETTER TO

JAMES M'GREGOR, M. D.

Deputy Inspector of Army Hospitals.

By HENRY REID,

Surgeon, First Battalion 89th Regiment, and Member
of the Physico-Chirurgical Society, Dublin.

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—♦♦♦—
1806.



TO JAMES M'GREGOR, M. D.

Southsea Place,

PORTSMOUTH.

SIR,

I HAVE endeavoured to comply with your desire in laying before you this essay on the disease of the eyes—a complaint which has pervaded several regiments of the British army with very considerable and alarming progress; but, from the unpleasantness of my situation,* I fear this statement will not be attended with that accuracy, order, and precision, with which I would have felt the greatest pleasure in submitting it for your perusal and observations.

The 89th Regiment arrived in Ireland, from Egypt, on the 9th of February, 1802, at which

* That of being obliged to live in the same casemate with three other officers whose unavoidable noise and hours of irregularity were far from being favourable to me, whilst employed in writing this letter.

time we had a great number violently affected with Ophthalmia; but before the month of May we had discharged such men as had sustained any injury of the sight; and I find, upon adverting to my books on this occasion, we had two, three, and four cases of that disease, during some of the months, in the years 1802, 1803, 1804, and 1805; and in the remaining months, in the above years, we had no such disease in the regiment.

We received orders to embark, at Cork, for the West Indies, in July, 1805; when we happened to have two patients affected with the disease, who were received into the general Hospital there. The regiment continued a fortnight on board ship, and was then disembarked; during which time we had not a single instance of the smallest appearance of the disease. It embarked again on the 29th of October, remained on board ship until the month of January, when we were disembarked in Germany; from which place we returned to England in February, 1806. Now, at this

very period I shall beg leave to remark a circumstance deserving some attention :—From the month of July, 1805, when the regiment was embarked for the West Indies, in the Cove of Cork, until its arrival in England from Germany, in February, 1806, we had not the slightest appearance, nor most distant suspicion, of the complaint in the regiment.

The first quarters the regiment occupied were in Margate, in which place, James Moran, at that time a prisoner of war by shipwreck, was the first person affected with ophthalmia. We had two cases besides—one of them belonged to the same company with him—and I have made a most particular and minute enquiry, if Moran or his companions, during their stay in Holland, had been situated where there were any people who complained of a similar disease—or if a part of the 5th regiment, with whom they came over, had any symptoms of the complaint—or if they heard of its prevailing in any town in England, through which they passed in proceeding to

their head-quarters—or if they had been in company with the soldiers of any other regiment on their route who probably might have the disease—and they positively asserted they had not.

I must remark, that these persons got entirely well before the removal of the regiment to the next quarters, which were at Ospringe, and consequently we brought no man to that place labouring under the disease.

The 95th, or Rifle Regiment, occupied the same barracks with the 89th; but I am not sure whether or not they had the complaint among them previous to our arrival; but let that circumstance be as it may, I can positively assert that the first attacks of it appeared among them in Ospringe.

Now, at this period, between the 5th and 20th of April, there were eight new cases in the regiment—in May, only four—in June, seventeen—in July, sixteen—and in the month of August, the enormous increase of seventy; which circumstance I can easily account for,

if my delicacy would permit the explanation. On the 3rd or 4th of August, the 54th regiment arrived in Ospringe, and were quartered in the same barracks with our regiment; which corps had the disease among them at Chelmsford, their last quarters, and absolutely arrived with a good many affected with it. I would be glad to know, could the 89th regiment originally render a corps diseased under the above circumstances, which I am credibly informed was ingeniously insinuated; nay, but what is more, flatly reported that we gave it to them. I would have avoided coupling the state of health of any other regiment with my own in this letter, but I feel myself particularly called on to state the fact.

After the above period the complaint began to increase in the 54th regiment, as it did also in the 89th and 95th; but the 89th were by no means affected equal to the other two regiments.

I have thus far proceeded in laying before you a general out-line of the commencement of

the ophthalmia with our regiment ; and as that complaint is attended with great danger to such as may have the misfortune to labour under it, it therefore demands not only much solicitude and attention from the medical men intrusted with its treatment, but also to guard against its making any progress among the healthy, which circumstance demands the most energetic assistance from commanding officers and others—otherwise the best medical efforts will prove fruitless.

I shall now commence stating some general and marked observations on the appearances of the complaint. When a man is first affected there is a simple inflammation of the eye : this inflammation may, or may not, be attended with one of its characteristic symptoms, which is a most unpleasant sensation, as if gravel, sand, or some other extraneous matter was insinuated between the eyelids : this, I believe, may be occasioned merely by the turgidity of the vessels. There may also be or not a great involuntary action of the eye-lids in the

incipient stage; such as, that the patient cannot look at you without repeatedly winking: but this is an action that is sure to occur in some stage of the disease, in consequence of the inflammation increasing in violence, the puncta lachrymalia become impervious, and the vast quantity of lachrymal secretion that takes place in consequence of being denied the natural channel to the nose, runs in great quantities down the cheeks, and as the patient expresses it, "scalding-hot." The rays of light become intolerable, the frontal and temporal muscles become engaged and are affected with a most unpleasant, dull kind of pain; which symptom I have experienced most severely in my own person. Under those circumstances, loss of appetite and fever take place; which last affection keeps pace with the violence of the local inflammation, which, if moderated during the day, it abates; but towards night the patient complains of the sensibility of the eyes returning, when the febrile symptoms also set in, and the night is spent in restlessness, inquietude.

tude, and pain. If rest be procured by artificial means those affections are suspended, but they visit him in the morning. When the active inflammation is in some degree diminished the tears are less in quantity, the eye-lids become closed, particularly in the latter stages, and some times inverted. The secreting surfaces discharge a humour of thick consistence, somewhat resembling cream in colour, the general state of health is much broken down, which evinces the great inflammatory diathesis that accompanies this disease.

There is one very alarming appearance that sometimes takes place in the incipient stage, or shortly after, which is a most violent tumefaction of the superior eye-lid, and has now and then a discoloration or blue aspect. Great fever and shooting pain of the eyes and temples accompany this very different form of the disease. The eye remains entirely closed, great secretions take place, and, from being locked up, their acrimony increases, which, if not particularly attended to and dislodged from

time to time, will ulcerate the surface of the cornea and give exit to the humours. I am strongly led to believe that this great tumefaction takes place in consequence of the large lachrymal gland, which is lodged in the superior and external angle of the orbit, being enlarged by inflammation ; and that, from the obstruction given to its secretory powers, this great tumefaction of the superior eye-lid is induced. The blood-vessels, with an additional formation of others, become much enlarged, particularly in the angles of the eyes, and so connected as to form a thick mass. Those cases commencing with the most formidable and alarming appearances have terminated more favourably than medical attendants may be induced to expect : but such cases cannot too strongly engage their most particular attention ; and I beg leave to remark, they are the only cases I, by any means, either recommend or use the lancet in, and then only on this congeries of vessels, which affords considerable relief to the patient.

I am now to consider whether or not this disease be infectious and contagious. Though I may not be able decidedly to prove that it is, yet my opinion thereon may be of the greatest assistance, not only to medical but military officers; as it may induce them, on their future observations, to put in practice such precautionary measures, as will arrest the progress of a disease, which, in the course of very little time, defeats the schemes laid down for the operation of an army—a partial instance of which I have already witnessed.* I must acknowledge I have it not in my power to adduce a single instance where it has been produced by an actual evidence of the matter applied; but, notwithstanding, I am strongly led to believe, that, in consequence of the constant and im-

* I cannot reprehend with too much severity the conduct of Adjutants and even Sergeant-majors, in some regiments, in intermeddling with the medical department, and making such arrangements, with regard to the sick, as they in their *great wisdom* think fit, to the very great injury of the service, and disappointment of the best devised plans of the medical officers.

mediate habits and communications, the soldiery are obliged to live in, the bed clothes, linen, and more particularly the forage caps, which they often take or accommodate each other with, when they are either too indolent to seek their own or cannot find them, are circumstances alone fully sufficient to communicate it by infection ; not to mention the handling of many other articles which must be previously touched by some person infected ; at which time they may unthinkingly rub the eyes with their hands, to which small portions of the matter may adhere from the articles handled, or the secreted fluid, by which I mean the tears, may very probably be applied to such articles ; which fluid, for ought I know, may have in it more of the infective principle than the thick matter. I have invariably observed, of the numbers affected, that they were the most slovenly and dirty in their persons, and upon an average, for one selected on inspections for the disease from the front rank, there have been ten from the rear—which rank, I believe, in

every regiment, is not always composed of the cleanest and best soldiers ; therefore, as far as I have been able to collect from my observations and from other corresponding circumstances, I can have no doubt but that it is highly infectious.*

I come now to a more difficult task ; which is to advance some observations in support of its contagious powers, which must be less plausible, in a practical point of view, than the former ; as we are supplied with fewer demonstrative helps in developing the springs of its action.

First, I have to observe, it is during the most active and inflammatory stage that it is most communicative—and by contagion, I mean,

* Since these pages were fairly transcribed, I have been afforded the opportunity of supporting my theoretical assertions, with regard to infections by practical proofs. Mr. Marshall, my Assistant, applied some matter to his eye, which produced considerable smarting pain and fulness, for the space of an hour ; but the disease did not establish itself. He communicated the infection to three other men—two of whom had the regular disease : which circumstances, I should think, will completely establish my theory.

when it appears to be caught by approach ; but now I must acknowledge myself ignorant of the laws that assist its communication, nor can it be followed with a sufficient and satisfactory explication, if conveyed through the medium of the air—for so subtile and mysterious is its communication, when we are denied any evident circumstances of its being produced by the tactus or intervention of clothes, or other substances, in this instance, that we are compelled to infer, that its communication must be through the medium of the air—at the same time, I think it may very probably be favoured or assisted by a strong sympathetic disposition ; for I have frequently remarked, and have heard the same observed by others, that people, without any complaint of the eyes, on coming into the chamber of such as were affected, the eyes of the former become immediately disagreeably affected, by looking on the diseased. Upon retiring from the chamber, this disagreeable sensation discontinues. Now, Query, Is this sympathy ? If granted ; then, if those

people, under this sympathetic action, remained in the same chamber, and exposed to the same atmosphere, might not that action of the eyes continue until the active inflammation be established, and consequently become the same disease ?

What I have advanced on this head is merely hypothetical, and may appear in a great degree fallacious ; yet, though we cannot explain sufficiently practical the mode of its communication, I think it fair to advance such conjectures as may appear probable—at the same time, not permitting our fancy to mislead our reason—and I must close this paragraph with saying, that, as far as it came within my comprehension to consider the subject, I am almost led to confess that the disease of the eyes, with which the soldiery have been affected so very suddenly and generally, is, in my humble opinion, contagious.

TREATMENT.

THERE have been many applications resorted to by practitioners for the cure and alleviation of this complaint; the virtues of some of which have been greatly extolled by them: but I am sorry to say, they have, in a great number of instances, been as blind as their patients—and the patients, on the other hand, from an anxiety to get well, expressed a sense of relief from every new-tried application; but as far as I have been able to collect, by observation on others, and from having laboured under the disease myself in a climate by many degrees less friendly to it, I have been ever since the warm advocate for the mildest and most soothing local applications; and I am happy to state I have every inducement not to alter my opinion of the merits of their advantages, having the pleasing reflection, that not a single instance has occurred where a fellow-creature has suffered the privation of that

most inestimable blessing, vision, or even the the smallest specks formed on the cornea, while I continued to have them under my management since my return from Egypt, in 1802, and it has fallen to my lot to have numbers under my care in that disease, particularly since our arrival in England.—Whereas I am credibly informed some regiments have been very unfortunate: A few cases I have witnessed myself of a most distressing nature, where vision has been totally destroyed, occasioned by ulcerations of the cornea, or by its thickening or opacity, attended with a diseased state of the conjunctiva.

It is an object of the greatest importance to have the patient as soon as possible under your care ; for which purpose I and my assistants have been in the constant habit of frequently inspecting the ranks, as the attention of non-commissioned officers, on a point of so much importance, as the health of a corps, cannot be relied on. In consequence of having them so soon under my care, I have, in a great measure,

shortened the period of the disease, by dropping into the eye, from a quill, the tincture of opium alone ; by which I have, in many instances, put a termination to the disease on the third day. But I shall treat more of the effects of opium in its proper place, as the general application of it cannot, by any means, be depended on. However, in the very commencement, it may be tried, and I have seen good effects from it without resorting to any other collateral helps. Though it may be tried generally in the incipient stages, the other methods for arresting the progress of the disease should, by no means be neglected, but put in practice as speedily as possible.

I commence with bleeding, to the quantity of seventeen or eighteen ounces, and towards the evening I open the bowels briskly with salts, which I would recommend in preference to any other cathartic, as this medicine must often be administered during the prevalence of the disease : for I have frequently observed that calomel combined with other

purgative medicines more suddenly wear down the patient, and often do more than you intend. I bleed the second and third day in general, but afterwards only as the circumstance of the case require; at the same time, still preserving a regularity of the bowels. The diet should be low; and if much irritation of the eye exists, fomentations of warm water should be constantly applied. If great and involuntary action of the eye-lids takes place, I would not introduce the tincture of opium, as many have done, nor any other stimulating liquid; but apply immediately a large hot poultice, which should be pretty often changed. After these applications the patient invariably expresses great relief. It has often struck me, and I am strongly led to believe it, that the great pain and irritation is not confined alone to the inflammation of the minute blood vessels, but to the whole of the small glands with which the conjunctiva is connected, for the case I have related, in the symptoms, of the great tumefaction of the superior eye-lid, in some degree,

corroborates my opinion. It is a matter of great importance, in the first stage of the ophthalmia, not to deplete too much nor too frequently, by either bleeding or purging, as this practice often proves injurious ; for the ciliæ, in many instances, become inverted, and the disease continues a long time stationary : and, even when you procure the elevation of the lids, if the sight be not destroyed, no stimulant you can apply will rouse the old and habitual inflamed vessels to take on them a new and absorbent action till the general health be, in some degree, recovered.

I continue to apply frequently the bread and milk poultice during the day, and between the applications I have the secreted matter washed away with warm water. When I wish to procure rest, which the patient often stands in need of, I give the opium combined with antimonial powder, or the *tinctura opii cum vino antimoniale*, as it renders the skin cool and moist ; whereas the the opium alone, parches it, increases excite-

ment, and very often, without producing the smallest abatement of pain. With respect to the application of opium to the eyes, I make a solution of the gum opii in simple water, which I strain, and drop into the eyes occasionally, when there is a considerable degree of inflammation existing. As soon as the active stage of the inflammation is suppressed, I use a weak solution of the sulphas zinci, which is introduced into the eye by a quill, and have experienced happy effects from it. If the inflammation continues obstinate, I wait till it has ran its regular course and then commence using the solutio sulphatis zinci in the manner above described. If it should not put on a disposition to get well by this gentle mode of treatment, but show an inclination to assume a chronic form, I introduce a weak solution of the hyarargyrus muriatus, the strength of which I increase or diminish according to the effects or action it may produce on the eye, at the same time commence with the use of the bark.

I beg leave to remark, that the moment any of the acute cases begin to put on a convalescent aspect, I remove them from the ward in which they laboured under the first stages of the disease, to another; when they have remained sufficiently long in that I remove them to the third, or a still more convalescent ward. Should any relapses appear to take place in the mean time among any of them, I immediately return such to the first, or acute ward again.

I select all the chronic cases, or such as seem to be much affected or liable to a relapse, and put them into a separate ward, give them a full regimen and administer the bark; as I am directed more from the general appearances of the health with respect to the diet than from any appearances the eyes may have in the majority of cases.

I cannot too strongly urge the necessity that appears to me for attending most particularly to the removal and classification of the cases in the manner I have stated, when even the smallest

appearance of convalescence begins to take place; as I have had the pleasure to observe the most favourable approaches towards the full establishment of a cure result from that practice; and do therefore recommend it most strenuously to be attended to, as well as to preserve the the wards allotted for the first stages as thin as possible. Having always observed when crowded that the air has become very unfriendly to the whole of the cases, many of which often put on an appearance of getting worse, and such as shewed the smallest disposition to recovery, the amendment was very slow and could not be accomplished without a removal, which strongly argues for it on the most trifling disposition to convalescence. I cannot too strongly impress the great necessity there is not only for the strictest personal cleanliness, but also of every other article in the wards, by frequently washing and scouring them with warm water, &c. as well as white-washing the walls occasionally. The state of the atmosphere in the acute wards, as above hinted at, precludes

any necessity, on my part, for the recommendation of fumigation, the repetition of which will be attended with the most sensible advantages.

I shall now take the liberty of contrasting the foregoing mode of practice with the following, the bad effects of which practice is obvious. I have seen instances where the eyes have been constantly bathed with a solution of cerussa acetata, and cloths kept constantly wet with it, and applied to them; but I have never known any advantages result from the well-meaning intentions of the prescribers; on the contrary, in my opinion, the greatest injury is the consequence—for the superior eye-lid becomes hardened, and sometimes inverted—which is naturally the case when strong saturnine solutions are applied: and, in consequence of this hardened state of the eye-lid preventing its elevation, the eye must remain closed during the whole stage of the disease, and the matter pent up must become more acrimonious, through the medium of its natural process, and from the exposition

of it to the cornea and conjunctiva ; both of which it must ulcerate, give exit to the humours, and the natural event is the destruction of vision. If this calamity do not take place, the opacity of the cornea will ; which is equally destructive to sight ; and the only consolation left for our feelings, is, that the deformity does not occur in so great a degree.

In the swoln or puffy affection that I have mentioned in the symptoms, the poultice should be often applied ; frequent and gentle injections of warm water should be thrown in between the lids, with a syringe, in order to wash away the abundance of secreted matter. The fever should be moderated in the mode I have stated ; and the large mass of vessels which forms in the angles of the eye and approach the cornea lucida, should be scarified. After which operation the eye must be constantly fomented with warm water, to promote the bleeding as it greatly relieves the patient. This scarification most likely prevents those vessels from enlarging to such a degree that they otherwise might very probably cover the whole surface of the cornea.

The great advantages, that are derived from the emollient poultices, even in the old and contracted cases, are, that they soften the state of the palpebræ, release great quantities of matter, which is rendered more mild and harmless, and enable the patient to open his eyes in a dark chamber, though closed for a long time before. In such cases also I would strenuously recommend the tepid bath, having seen the happiest effects from it in a variety of instances.

I shall now proceed to state what has fallen under my observations from the use of blisters, setons, shaving the head, opening the temporal arteries, bark, and calomel.

I have applied blisters behind the ears and on the temples separately; I have also applied them on the temples, so as to extend pretty high up, approach the eye-brow, project behind the ears, and come down the side of the face as far as the tip of the ear; I have applied them to the ligamentum nuchæ; have shaved the entire head, and applied them

from the vertex capitis down on the neck : but, instead of relief being produced by them, whether in the incipient, middle or chronic stage, I have uniformly remarked the consequences have been, a greater degree of irritability of the system, and a considerable increase of inflammation of the eyes ; so that I can positively assert I have not observed any good effects result from them, either at the time of their operation, or at any subsequent period ; so that, in the treatment of this disease, I have entirely laid aside the application of them, as they not only kept up local, but general irritability to which the system was too much previously disposed.

The heads of a great number have been shaved and kept washed with cold water. The eyes of some have appeared to have derived a little strength by this partial ablution ; but it did not continue to encrease, as the eyes returned to the same state they were in previous to the practice of it, as soon as the novelty or shock of it became habitual to the system.

I have also tried the cold bath with a great number of the convalescents, in the summer months, whose eyes, after the second or third immersion, have appeared, in some degree, strengthened ; but afterwards, a secondary inflammation came on, which particularly affected those of a scrophulous disposition, who, on the slightest exposure to cold air, experienced a renewal of the complaint.

The use of setons I have tried in about eighty cases of different descriptions, with as little success as the blisters, and have uniformly found that they have acted as the source of irritation ; and, on that account, have discarded them altogether.

The temporal arteries I have often opened, but no decrease of the local inflammation has accrued from this operation.

A partial salivation I have sometimes produced, which appeared to give a diversion to the disease : but this was not permanent. The only advantage calomel seems to possess, is, when given as an alterative when the tasis

or glandulæ ciliares are affected by the violence of the diseases; and as local application, I would recommend a weak ointment of the hydrargyrus nitratus ruber.

I have given the bark, in large, and in small quantities, to patients of a scrophulous habit, and otherwise; but never until they took on them the chronic form, or were much reduced in their general state of health. It gives general tone to the fibres, and assists in rallying the feeble and remaining powers of the constitution; therefore submit it to the judgment of the practitioner, when, and in what cases, he may think it most proper to be administered.

From what I have offered to your notice in these pages, I shall, in a summary manner, collect such circumstances as appear to me the leading objects that I would recommend to be attended to: first, to get the patient as soon as possible under your care; to bleed and physic with judgment in the first stages; to pay the strictest attention to cleanliness; and a quick removal to the convalescent wards; when the

slightest appearance of a disposition to recovery evinces itself; to attend most minutely to a classification of the cases, to prevent, if possible, the disease from running into a chronic stage; to moderate the fever when it occurs; and, when the general health is much impaired, to assist the feeble and remaining powers in recovering themselves.

“Vive, vale. Si quid novisti rectius istis,

“Candidus imperti : si non, his utere mecum.”

What I have laid before you, Sir, in the foregoing pages, I fear may fall far short of your expectations, and have very little to recommend it, in many respects, independent of the stile in which it is written; but the only apology I can offer in submitting it to your perusal is the great success which has attended the mode of practice I have pursued.

I shall now beg leave to submit, for your information, a statement of the number admitted and discharged, since our arrival in England, who, with the exception of those left at Ospringe, were treated according to the

plan here laid down, not one of whom has sustained the smallest injury of the sight.

In March, the number admitted were 3

April 8

May 4

June 17

July 16

August 70

September 104

October 114

November 70

December, up to the 24th . . . 89

Total admitted . . . 495

Discharged cured . . . 410

Remaining in hospital . . . 85*

Of the number of cases of the ophthalmia, left at Ospringe, when we marched to Ramsgate for embarkation, forty-eight are still there ; and the following is a correct Report of their state, dated December 23d.

*. This statement includes those remaining at Ospringe.

- 13 Free of that disease,
1 Blind,
1 Blind, with slight hopes of recovery,
1 Blind of one eye,
32 Still labouring under the disease.

Permit me, Sir, before I conclude, (and I trust I shall be excused for paying this my little tribute of respect) to express to you the high sense of obligation I consider myself under for the many useful, judicious, and practical observations you have communicated to me on your frequent visits, and always with that degree of politeness and candour, of which I hope I shall ever feel fully sensible.

I hope I may be indulged with the liberty of recommending to your notice Mess. M'Kechie and Marshall, my Assistants, with whose professional attentions I have every reason to feel highly pleased, which I hope you will not fail in taking the earliest opportunity of communicating to the Army Medical Board ; for, in justice to those gentlemen, I think them, in every respect, highly worthy of the imitation of the junior medical officers of the army.

Wishing you every professional success,
allow me, Sir, to subscribe myself, with the
highest sentiments of respect and esteem,

Your most obedient

and

Most humble

Servant,

HENRY REID.

Fort Cumberland, Portsmouth,
December 26, 1806.